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Adulteration of Sweets by Glucose— "They Make Money Out of it."

The manufacturers of that vile trash, glucose, are ever on the alert to find new excuses for adulteration. They now assert that pure honey when analyzed is found to contain "76 per cent. of pure glucose," and then foolishly advise the addition, perhaps, of 76 per cent. more of their *impure* trash to it, so that some one dishonest enough to take their advice, should "make money out of it."

Failing any longer to make it profitable for the "mixers," in the large cities, to continue their vile trade, they now desire to enlist bee-keepers to dishonestly feed it to the bees to store it, so that it may be sold for *honey*, and encourage them to do it, because they can "make money out of it."

What do they care if it does poison millions of bees while carrying and depositing it in their combs?

Why should they have any compunctions of conscience about its effect upon millions of human beings, wearing out their stomachs, entailing disease and death, if they can "make money out of it?"

The one result, "making money out of it," is the excuse as well as the reward for dishonesty.

The following communication from the able pen of the Rev. L. L. Langstroth on this subject, will be read with more than ordinary interest:

My friend Mr. D. A. McCord wishing to test the value of grape sugar, as a bee-feed, wrote to a glucose manu-

factory asking their prices. This reply came:

—Feb. 21, 1883.

DEAR SIR:—Yours of the 13th to hand. We will quote you glucose at 4½ cts. per hundred lbs.—in 100 pound kegs. You will find it fine food for producing honey, as pure honey analyzes 76 per cent. pure glucose.

Yours Respectfully,

THE GRAPE SUGAR CO.

Mr. McCord wrote again, stating that he wanted grape sugar for a spring bee-feed, and not glucose, and received the following:

—Feb. 26, 1883.

DEAR SIR:—Yours of the 24th received, and shall have attention. We think if you will try it, you will find that you can produce honey very fast, and of fine quality. They feed it very largely in California, and make money out of it. Would like to hear from you after you try it.

Yours Truly,

THE GRAPE SUGAR CO.

Following this letter came glucose instead of the grape sugar ordered. It was about as thick as good honey, and almost as clear as water. As the bees stuck fast to it and died, no use was made of it as a bee-feed. Its taste was sweetish and decidedly bitter. No name was given in the above letters but that of the Company, called after the place where their establishment is located.

Prof. Marsh, of the Miami University Training School, furnishes the following analysis of that glucose:

OXFORD, O., July 5, 1883.

DEAR SIR:—I have tested the sample of glucose syrup which you handed me for analysis, and find that it contains large quantities of sulphuric acid and sulphate of lime. The sample of pure honey was found to have a slightly acid reaction.

Very Respectfully,

B. F. MARSH.

L. L. LANGSTROTH, Oxford, O.

Lime and free sulphuric acid! no wonder it has a bitterish taste. In order "to see what would come of it," Mrs. McCord used it in the making of some gingerbread. The product was poor stuff indeed—not having the ordinary sweetness of corn bread. It *puffed up* remarkably—a thing easily accounted for when the analysis showed how rich the glucose was in sulphuric acid. Syrups, etc., increased in volume by glucose mixtures, are no more to be

commended than this expanded gingerbread.

"Pure honey analyzes 76 per cent. pure glucose." One would think that if honey was so largely glucose, it would be scarcely necessary to add more to it! It has never yet been made to appear that glucose as pure as that contained in honey or fruits can be *cheaply* produced. If the time shall ever come when it can be, it would still be a fraud to use what has so low a sweetening power (only about one-third that of cane sugar), for adulterating molasses, maple syrup, sugars, candies, etc.

A friend of mine was told by the captain of a boat on which he was travelling, that he carried many barrels South to be used in adulterating their sweets.

Another friend informs me that he saw 40 barrels of glucose at one railroad station, all of which was to be used in adulterating maple syrup!

Mr. Chas. F. Muth, of Cincinnati, O., perhaps the largest dealer in honey in the West, and who has done so much, both by precept and example, to discourage the sale of adulterated honey, has had glucose recommended to him by large dealers in it, as a good thing to mix with honey, so as to "make money out of it." At one time he said to me, that in his opinion, most of the so-called maple syrup in the Cincinnati market was largely glucosed.

It is only within a short time that any quotations of glucose or grape sugar could be found in the grocer's papers. Will any advocate for their use, let the world know for what legitimate purposes the vast amounts made of them are used? Dare any one connected with the making of glucose, tell the public in plain words exactly for what purposes they are actually used? I fear not.

Confident assertions are not wanting, to show that only a pure and harmless article is made, and, you might imagine, that its makers are deeply grieved that this good creature of God is ever used by bad men for shameful adulterations. They would be ever so glad to put a stop to said doings if they could. Believe this, who can?

I do not know that hitherto any proof has been given to the public, that some, at least, who manufacture glucose and grape sugar, are acting the part of tempters, and even going so far as to suggest to those who wish to purchase them for a legitimate experiment, how money is to be made

by adulterating honey with their wares.—“There is money to be made out of it.” Does not such a way of doing business strongly suggest the crooked methods of those who deal in counterfeit money?

Business, in any proper sense of that word, means transactions between parties, where both buyer and seller are benefited by the deal. Tried by this standard, adulterators of the great commodities of life, will not seem to rise much if any above the level of gamblers, counterfeiters and cheats.

You will notice, Mr. Editor, that I do not give to the public the name—nor does Mr. McCord authorize you to give it—of the company with which he was in correspondence, for we do believe that this company is a sinner above all others who make the same products. The original letters are herein sent to you, so that in the mouth of at least three witnesses their genuineness may be established. Oxford, O., July 3, 1883.

The “original” letters sent to us by Mr. Langstroth, have been scrutinized and returned to him. They are correctly printed at the beginning of the above article. Just think of the villainy of asserting that “they feed it largely in California,” to deceive bee men in Ohio, and get them to engage in the nefarious business of adulteration!

No matter if the large trade in California honey is ruined by the circulation of this false report, so long as “they [the glucose manufacturers] make money out of it.”

It is high time that stringent laws were enacted and rigidly enforced against this hydra-headed monster adulterator!

Going South.—The *Planters' Journal* remarks as follows about bee-keepers emigrating to the South:

Large numbers of Northern bee-keepers are seeking the flowery fields of the South, where the bees find ample natural foraging ground, live all winter without being housed, and in various other respects prove more profitable to their owners. There is no earthly doubt but that the South is destined, and that at no distant day, to become the greatest honey producing and honey exporting country on the globe. We hope soon to see a regular Southward exodus of men and women engaged in this industry, from the North and Northwest.

Honey Shower.—John B. Drake, of Kappa, Ill., extracted in two days, recently, 600 pounds of honey from 12 colonies of bees. A pretty good example of the “honey shower” now existing all through the Northwest. Keep all the buckets right-side-up, to catch it.

A Few Pointers.

The *Grange Bulletin* contains the following under the caption of “Things about bees worth knowing:”

The mother queen leads the first swarm of the season, and the second as well as the third swarms, are led off by the young virgin queens.

Not one swarm in a hundred will go direct from the old hive to the woods if led by a prolific queen, but will settle near by, before taking their farewell leave of the old home.

It is always best to have your hives ready for taking care of your bees as soon as settled, if you allow them to swarm in the old pod-auger style. Always do your swarming in the proper manner and at the proper time, which would save many would-be runaway swarms if left to follow their own inclinations. Artificially swarm your bees.

It is a well known fact that bees never visit two or more distinct classes of flowers on the same trip, but always procure a full load of pollen or honey of which ever kind they commence on first, and return to their hive or home to unload before making a change.

Bees are very useful in the fertilization of flowers, seeds and plants, as well as being very necessary in the proper maturing of all classes of fruit, especially apples, peaches, pears and plums; also many other valuable and useful fruits of which we have not time or space to enumerate. Watch with care and you will learn many valuable lessons from your bees through the various departments of life.

Queens are produced from the common eggs that would have hatched worker bees if left in the common brood-cells and fed the usual food of honey and farina; but having been provided with a royal cell and also royal paste, as food on which they are bountifully provided, it transforms them into a royal queen, who is to be the mother of the future increase of the hive, or swarms.

Bee-Keepers' Picnic.—The *Indiana Farmer* gives the following as a partial report of a bee-keepers' picnic in that State:

The bee-keepers of Hendricks and Boone counties held a joint society meeting at the residence of Dr. J. H. O'Rear, at Lizton, June 23. The gathering was really a bee-keepers' picnic, and was well attended, bespeaking success to the Societies. Every subject of interest to bee-keepers of the present time was thoroughly discussed; the members showing a knowledge of the subject which can only be acquired by careful study and diligent inquiry. A committee of members from both Societies was appointed to arrange a second joint meeting of the Societies at some place in Boone county during July or August. Too much cannot be urged in the furtherance of meetings of this

kind. The plan has been followed by the many horticultural societies throughout the State, making them very successful and interesting to all concerned.

OBITUARY.—We are sorry to announce that Death has entered into the circle of publishers of bee papers, and snatched, as its victim, Mr. Theodore Houck, late publisher of the *Bee-Keepers' Exchange*, Canajoharie, N. Y., who died at Denver, Col., on Saturday, June 16, 1883, at the age of 26¼ years. His death was quite sudden. The *Exchange* gives the following particulars:

We are reminded, in the death of Mr. H., of the frailty of this life. Up to the first of last January Mr. H. was a perfectly healthy man, having passed an examination just prior to that for a life insurance. On the 2d of January, Mr. H. attended the meeting of the Eastern New York Bee-Keepers' Association, held at Albany. He put up at a hotel that night, and was assigned a room and bed that had not been used for some time; the consequence was that he took a severe cold which settled on his lungs and hurried him to his grave with quick consumption. Mr. Houck was a thorough bee man, beginning when a boy, and continuing until his health gave out and death came. He loved the bees, and was never happier than when among them. His public career was short, about 18 months ago he purchased the supply business and *Bee-Keepers' Exchange* from Mr. J. H. Nellis, and conducted them up to within a few weeks of his death, his failing health compelling him to place them into other hands. He leaves a widow bowed down with grief, having in one short year buried her husband and little boy, their only child.

The *BEE JOURNAL* condoles with the stricken family in their affliction, and sincerely hopes that Mr. H. had, in life, provided for his family by obtaining the insurance policy mentioned by the *Exchange* in the above paragraph.

Lessons of Industry.—An exchange remarks as follows:

The bee has long been a type of the industrious worker, but there are few people who know how much labor the sweet hoard of the hive represents. Each head of clover contains about 60 distinct flower tubes, each of which contains a portion of sugar not exceeding the five-hundredth part of a grain. The proboscis of the bee must, therefore, be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, and as honey contains three-fourths of its weight of dry sugar, each pound of honey represents 2,500,000 clover tubes sucked by bees.

Bee Statistics in Germany.

Mr. C. A. Stoepel translates the following on this subject from the *Deutscher Bienenfreund*, for the *Bee-Keepers' Exchange*:

The census in Prussia, Germany, of 1883, shows a decrease in the number of colonies of bees kept since 1873. The whole number of colonies kept in 1873 was 1,461,055, and in 1883 are kept 1,232,231 only, a decrease of 228,824.

Mr. Suppea, a notorious bee-keeper, feels quite disappointed over these figures. He thinks that bee-keeping cannot be a paying business to many bee-keepers, or that the bee-keepers must have lost heavily during the last terrible winters.

He says that these figures are a scorn and sneer in the face of all the work done by the different bee-keepers' societies, and all methods set forth in many manuals on bee-keeping toward the advancement of apiculture. Probably these figures are a judgment on all the new-fangled bee-houses and foreign bees, or the result from low duty on foreign bees.

C. J. H. Gravenhorst thinks as a reason why bee-keeping has not been successful with many is, that there is no law protecting bees from the many dangers they are exposed. Lawsuits over the keeping of bees increase from day to day. Birds, although their benefitting the public, is sometimes very doubtful, enjoy such a protection, why cannot bees enjoy such a protection, as well as birds do?

At present there is a project of such a law, appended with 16,000 names of bee-keepers before the Reichstag, urging the same to be adopted as a law.

Why Bees Work on Sunday.—An exchange gives the following very silly story as a reason:

We have just been interrogated by one of our students who asks the question: Why do bees work on Sunday? To which we answer: In the beginning, God created all things perfect, and to the honey bee he gave an unusually keen acuteness of smell which enables them to become great foragers. And seeing that the red clover was a grand honey-producing plant, he also saw that the honey-bee was likely to outstrip all other insects in storing up large quantities of honey, especially so if allowed to work the red clover; and to prevent which he gave the hive bee its choice either to work on the Sabbath and let the red clover alone, or to work on the clover and rest on the Sabbath, the honey-bee preferred to work on the Sabbath and let the red clover alone. Hence, the reason the common bees of this country leave the red clover for the humble, or what we commonly call the bumble-bee, to work on. And thus the honey-bee is permitted to work on the Sabbath; while we, as his created beings, in His own likeness, are commanded to remember the Sabbath day and keep it holy.

Foul Brood.—Mr. E. W. Felton, of Hastings, Minn., has sent us a sample of what he thinks is the foul brood, with the following letter dated July 2:

I send a comb of foul brood, which I have had in my apiary for the last four seasons. The second season I undertook to eradicate it, and commenced Aug. 7, giving the bees clean hives and foundation, and scalded honey; but it was so late that they did not build up strong enough to winter without doubling up, which reduced them from 30 to 10, and the disease still remained with them. They increased from 10 to 16 last season, and gathered 800 pounds of comb honey and 200 pounds of extracted. I brimstoned them last fall, boiled the hives, burned everything else, and bought 30 colonies last spring; they are in the midst of white clover, and storing honey very fast, and no signs of foul brood yet. I let one of my neighbors have a few colonies last season, three miles from my place, they are doing well, and have no foul brood now. I would like to know if they ever get rid of it without any help. Will some bee-keepers, who have it in their apiary, give their experience with it?

Having had no experience with foul brood, we do not feel competent to give any advice or opinion. It is committed to the flames at once. We do not like it around, and hope our friends will not send us any more samples of it.

We have received a large pamphlet of 50 pages on the Honey Plants of Italy, enumerating them, giving their time of blooming, qualities for honey, etc. It is written by Dr. L. Savastano, and published at Napoli, Italy.

Imported Queens.—The Lexington, Ky., *Transcript* remarks as follows about an importation of bees just arrived at that city:

Messrs. Mucci and Frank Storm, of our city, brought into our office on yesterday, some bees that they had just imported from Italy. They had come by express in a neat little hive, with honey in it. They cannot speak a word of English, but they sting in the American language. The importation was solely for the sake of the queens that were in each little hive, and the few common bees sent along with them were simply as a retinue for their royal highnesses; the queens, like royalty, queerly preferring to starve to death rather than do any menial service for their own sustenance.

The queens are easily distinguishable by the practiced eye. A single queen bee imported to this city once cost Dr. Dillard \$30, beside a trip to Ohio to bring it here. Bees are imported here from Germany, Cypress,

Palestine and Italy. Those from Italy are the best workers, and are gentler than others.

A Sample—By George.—The Fremont, Mich., *Indicator* says:

"The compliments of the season," was the inscription attached to a choice piece of honey from the apiary of Geo. E. Hilton, yesterday. George now has 43 colonies of bees, making his prospects for honey 'simply immense.'"

That is the correct way; Mr. Hilton has hit the nail on the head. Now, follow this up with some instructions about "Honey as food," and all the honey will be sold as fast as produced.

Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 9, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Extract, honey has commenced to come in freely, and a large crop is reported from all quarters. The demand is very good, and keeps pace with the arrivals. For choice extracted honey I pay 74¢10c; the latter price for choice clover. I have received several nice lots of comb honey, for which we paid 15¢16c on arrival.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 32c. for a good article on arrival.

CHAR. F. MUTH.

NEW YORK.

HONEY.—Best clover in 1-lb. sections (no glass) 20¢21c; in 2-lb. sections (glassed) 19¢20c. Fair quality, 1 and 2-lb. sections, 16¢17c. Extracted, white, in small barrels, 10¢11c; buckwheat, 8¢9¢. BEESWAX.—Is more plentiful. Prime yellow sells at 34¢.

H. K. & F. B. THURBER & Co.

CHICAGO.

HONEY.—The demand for extracted is good, and the market bare of all unfermented honey. Prices range from 8c. to 10c. Comb remains lifeless and will until the new crop comes, or until August. Sales of comb are being made at 8c. to 15c.

BEESWAX—30¢35c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—New extracted is arriving freely—selling for 7 and 8 cts. New comb coming forward slowly; extra white, 16c.

BEESWAX.—No beeswax in the market.

STEARNS & SMITH, 435 Front Street.

ST. LOUIS.

HONEY.—Some new comb jobbing at 14c, but old do. nominal. Only a few barrels of extracted and strained sold within quotations—6½¢7½c.

BEESWAX—Sold irregularly from 32¢34c—mainly at 32¢33c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—There is a moderate sale for best white 1-lb. sections at 18c, occasionally 19c, but 2 lbs. are not called for. Extracted has no sale at all.

BEESWAX.—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Our market is fairly active. We quote: ½ lb. sections at 30c; 1 lb. sections, 22¢23c; 2 lb. sections, 20¢22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX.—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.



For the American Bee Journal.

Making or Forming Nuclei.

G. M. DOOLITTLE.

Every bee-keeper who expects to be up with the times, and make the most from his bees, should have on hand, at this season of the year, several laying queens, held in reserve to supply any colony needing a queen at a moment's notice; especially where any method of increase other than natural swarming is adopted, reserve queens should be kept on hand to be given to the queenless part of the divided colony.

In order to keep these reserve queens, it is necessary that we have a nucleus or small swarm of bees in which to rear them, from the time the queen-cells are ready to be taken from the colony producing cells, till the queen is fertilized and ready to become the mother of a colony.

Many ways have been given for making a nucleus of bees, most of which prove to be a failure, and result in loss with the inexperienced. The one most commonly given in our books and bee journals is to go to any colony which can spare them, and take a frame of hatching brood and one of honey, together with all the bees thereon (being careful not to get the old queen), and place them in a hive where you wish the nucleus to stand; thus forming a miniature colony of bees. The hive is to be contracted to the requirements of the nucleus, and in 24 hours a nearly mature queen cell is to be given. This looks very pretty on paper, but when we come to put it in practice, it is found that in nine cases out of ten, so many of the bees will return that our nucleus is practically good for nothing, and often results in the chilling of all the brood in the frame, if the weather is cold. The other day, while in conversation with a bee-keeper having several years' experience, more than the writer of this article, he remarked that his nuclei had "gone back on him," and when asked how he made them, he gave the above plan. I remarked that it was strange how young a bee would return to the old hive under such circumstances, when he said there was scarce a hundred bees left in his nucleus where he had put a quart or more.

If the above plan fails in the hands of a bee-keeper having 16 years or more of experience, how can it be expected that the novice will succeed with it? Several years ago, after repeatedly failing with the above plan, I had occasion to set a frame of bees and brood, on which was the queen, into an empty hive, and to my surprise nearly all the bees staid where I placed them. In a few days I returned the queen, and as the bees had become established in their new location, while the queen was with

them, a good nucleus was the result. Thus I learned how I could form a nucleus which could be depended upon every time. Another thing I ascertained, that a colony having queen-cells considered such cells the same as a queen, and by taking a frame of brood which had a nearly mature queen-cell upon it, together with one of honey, bees and all, from such a colony, a nucleus could be formed so that nearly all the bees would stay where placed. Thus to make several nuclei, all I had to do was to count the queen-cells in the hive about the time they were sealed, then go to the other hives and take frames of hatching brood (brushing off all the bees), till I had as many as I had queen-cells, and place them in the hive having the cells. Two days before the queens were to hatch, cut out the cells and fix one in each frame of brood, and the next day make the nuclei by taking the frames to their several hives, giving each a frame of honey. In this way I rarely, if ever, had a nuclei "go back on me," and have so framed the most of my nuclei till the present season. This season I have adopted a new plan which pleases me so well I will give it to the readers of the BEE JOURNAL, so they can share in my pleasure. Seeing a note in some convention report, of how a party had a queen nursery made so he could hang a frame of queen-cells in it, and then hang the nursery in a full colony of bees in the place of a frame of brood, I jotted down in my reference book (see former article on "How to use our bee journals"), under the appropriate date, "Try forming nuclei in that way," giving page and bee journal where it was to be found.

When the time arrived I made a cage of wire cloth, which would hang in the hive, and large enough so that one frame would hang inside of the cage. I now got a frame of hatching brood, brushed all the bees off from it, hung it in a hive having a full colony of bees, and left it six days, when I had the cage pretty well filled with bees, and more hatching all the while. I now took it to a hive where I wished a nucleus to stand, took the frame out of the cage, placed a frame of honey by the side of it in the hive, placed the cage in empty side of the hive, so the bees which adhered to it could get with the rest on the combs, and I had a nucleus so formed that none of the bees could go back, for they had never had a flight. I was also independent of the weather, for a nucleus could be thus formed during quite cool days and nights.

Another thing which pleased me still more: The next time I tried I inserted in the frame of brood, before placing it in the cage, a queen-cell nearly ready to hatch. As this queen-cell hatched in a day or so, I had a queen 5 days old in my cage when I took it to my nucleus hive. In a day or two she took her wedding flight, and I had a laying queen 5 days after I formed my nucleus, thus making a great gain of time. I have written this in a hurry, and if all is not sufficiently plain, I will describe it

further. All will readily see the advantage of the plan.

Borodino, N. Y.

For the American Bee Journal.

A Few Wrinkles From

J. O. SHEARMAN.

On page 302, it is stated that the queen "utters shrill notes of anger." Allow me to state how it is done; perhaps it is not generally known. The queen makes the noise termed "piping" with her wings. I have repeatedly seen them do it, and shown it to other bee-keepers. The motion is much the same as that of a cricket when chirping (so called). I did not suppose any bee had a voice, in fact, how could they shout so loud with their proboscis? Because—elephants do? But elephants have to shout through their trunk or keep still, as they have no wings to vibrate.

Wrinkle 2. As so much is said about introducing, I will say that I always liberate a choice queen as late in the evening as I can see to do it, unless the conditions are all favorable. A queen can be quietly dropped into a prepared colony with hardly any risk, if put in so late that the bees cannot see to fly, and so quietly as not to stir them up. I used to do it by a round wire cage, with a plug at each end, and a string tied to each plug, and then ends of string brought out from under the quilt-cover, then leave the wood cover off the hive and pull the strings gently till something (the plug) separated. It would be done so quietly and late that "no one knew it but me." Another point is, the queen will not crawl out of the hive in the dark, as sometimes happens in mid-day. The queen is to blame for nearly one-third of the failures in introducing, provided, of course, the colony has no queen cells.

Now honey is coming with a rush, and it may be done almost any way, and the quicker the better, to save time.

Wrinkle 3. Can a queen breed two kinds of drones at the same time? or would it be called an indication that there might be two queens in a hive, to see drones like pure Italians, and pure blacks, living together by the hundreds? How is that Mr. Heddon? Please answer through the Weekly.

To explain my case—I have a very strong colony, put up last year for extracting, with a full set of drone combs in the second story. I had one of those dark Italian queens, impurely mated; the colony did not swarm last year. I ran all the season for extracted honey, and did well; then, in the fall, being very busy, I was caught by the snow before all my bees were packed for winter, and, as we had much weather last fall that was too bad for brushing bees off the combs, this big one was among those unpacked, and therefore was carried into the cellar with the rest. It weighed over 100 lbs., possibly 150 or more. They wintered tip-top—went to breeding early, and kept it up, as they had plenty of backing. They filled the

brood chamber, then went for the drone combs, and filled them all but two (or else emptied them, which?) any way, they weighed much less. Then I interfered, as we had a little spell of mild weather (this was about fruit bloom time). I took away all the drone combs, put them in a hive, gave them one that had a little brood in (worker brood), and a ripe queen cell, and started in for a drone swarm as an experiment. The queen came out all right, but took longer to fertilize than usual and did not lay much, but this may have been owing to the bad spells of weather we had at that time. Then I gave them a frame of brood, but, as they did not flourish, last week I took away all the drone combs, put the queen in a new hive on the old stand, moved the drone swarm away, and killed 1670 by count, besides what few I would waylay by cuffing one and kicking another when down. About half or more were the yellowest drones I ever saw, and the rest as near like black drones as I know how to make them. Now, did one queen furnish the brood for all those drones, or have help? or did they merely run out of stripes for them? Mind, the drones are not all dead yet, only thinned out some, and it was not a very good day for drones either.

How many drones will a swarm have? Owing to circumstances? The Text books say 200 to 300.

I once put a drone comb in an Italian colony, to raise some on purpose, and when I had done with them, I killed 1900.

Wrinkle 4. Noticing Mr. Heddon's indicator on page 301, also so much talk last winter about little slates, moves me to mention my method of keeping track of what is going on, which I call signals. I use two or three little sticks to tell most of what I want to know in regard to the condition of my bees in the working season. For instance: 1st division, a stick laid on the front part of a hive has reference to the bees, while on the back part refers to honey or surplus arrangements.

2nd. A stick laid lengthwise, or with the frames means all right, or in working order, or it has been attended to; while if it is laid diagonally, indicates something doubtful, or in *statu quo* for the present only, but will need to be looked at again some time.

3d. Anything laid crosswise, may be it needs something done, while two sticks laid crossing each other show that part of the hive needs looking after urgently, etc.

The larger the object in case of an urgent signal, the more urgent is the call. It will be seen that much can be said with a little movement of one stick or two, and you could easily see them as far as you can get a fair view of the cover to the hive. If I have a signal to show that something needs to be done with any hive, I can trust to my memory for the rest, and so keep posted as to the needs and condition of my bees (100 colonies or more), without writing much, and it is quicker.

The most I write down is the pedigree of queens (and that by number),

and anything in regard to nuclei in rearing queens, etc., though most of that can be shown by a stick. I use entrance blocks mostly.

On page 300 the sense was perverted by putting a period at profit, where there should be no pause (4th line from the bottom of the page).

New Richmond, Mich.

Prairie Farmer.

Hiving Bees—Clipping Bees' Wings.

MRS. L. HARRISON.

A lady called on me yesterday who had caught a runaway swarm of bees and hived them in a nail-keg. They had been in it four days and she had procured a Langstroth hive, and wanted to put them in it. A friend, "who knew all about bees," told her to jar them down in front of it. Had she done so, their nice white tender comb, that they had built, would have broken, and might have killed the queen in falling. A better way would be to alarm the bees with smoke, invert the keg, and place another over it, and rap on it with a stick. The bees will crawl up into the empty keg, and cluster in about 20 minutes. The bees are then out of the way, and the comb could be taken out, and fastened into frames with little splints. While this is being done, the driven swarm should be placed where the old one stood so that the bees returning from the fields will unite with them. A warm part of the day should be chosen to do the work, as many bees will then be absent in the fields and out of the way. As soon as the comb is transferred to the frames, it should be put into the hive, and placed where the keg stood, and the bees jarred out in front of it. If the bees do not incline to enter it, they should be driven with smoke. If honey is abundant, they will soon be at work repairing the damage, and bringing in honey as though nothing had happened. An expert transfers without driving, but a novice had better have them out of the way.

Bees are full of antics this season; they ascertain what time their neighbors are going to *flit*, and join company. They are not always in good humor, and when one colony clusters on a limb, they fight another joining them. It is only a pleasant pastime to have one colony clustered alone, but when several unite, it is a pandemonium. If the queens can be caught and caged, order may be restored, but this can be seldom done, as it is no easy task to discover a queen among so many thousands moving constantly. If these united colonies are hived together, only one queen will be retained; the others will be destroyed. Sometimes they will issue again, and cluster separately, to the delight of their owner, but oftener enter other hives, raise the mischief generally, and many will be destroyed.

This week one of these erratic colonies issued, after being hived a couple of days. We saw them, and fortu-

nately caught her majesty before she took wing, and pinned her to a comb in a tin cover with a wire gauze top, where she is now, much to my satisfaction. A comb of unsealed brood was also given this colony to nurse and rear, so that they may forget their foolishness, stay at home, rear children, and mind the house. As soon as this colony missed their queen, they returned in search of her, entered the hive, and finding her, set up a joyful hum.

Many apiarists practice clipping the queen's wing, so that when the colony issues they will return, as she cannot accompany them. When they swarm she crawls out, and can be picked up, placed in a new hive, and if the old one is removed, and the new one put in its place, the bees return, enter it, and, finding their queen, remain. It can now be removed to the stand it is to occupy, and the old one restored to its former place. Some persons, ignorant of the habits of the honey-bee, clip unfertile queens; this ruins them, as they cannot fly out to meet the drone.

The first swarm is accompanied by the old queen—which is fertile—all after swarms have unfertile queens, and if they are lost on their "bridal tour," the colony will dwindle away, unless supplied with another, or the means to raise one, as there are no eggs in the hive. The loss of the queen may be known at first by their mournful hum, running out and in of the hive, and touching the antennae of their fellows. In a day or so they appear listless and idle, but if a queen, or a queen-cell, eggs or larvae are given them, all be activity and life.

Peoria, Ill.

For the American Bee Journal.

A Review and a Reply.

JAMES HEDDON.

I am much in sympathy with the individualism expressed in Mr. W. H. Stewart's article on the standard frame, on page 332 of the current volume.

As one of the advocates of the standard frame, I want to say that I favor the adoption of a standard, as near as possible and practical. I believe the Langstroth frame to be the best in use, all things considered. I may be in error; however that may be, I am forced to express my honest opinion, if I express any. Now, I would not make a law to compel any man to change one hive. That would be wrong. I will, however, urge all who are beginning, or who can change without too much sacrifice, to do so. Just suppose for the sake of the argument, that the Langstroth frame is as good as any, and no better. The time has already arrived when it will pay to change quite a number of hives, or if you have 10 or 20 American hives, to adopt the Langstroth hive for all future increase, and close out the Americans as time and circumstances make it practical. I should do this if I had 50 of them on hand; yes, even 100. Now if I thought the American

hive the best, *enough* best to pay for my paying extra prices for irregular supplies, I would use it if I was the only man that did, and all the world clamored against me. I honor him who has the grandeur to entertain convictions of his own, and the bravery to announce them on all proper occasions. I am the last one who wishes to force him to sacrifice his manhood by renouncing his convictions, either by the finger of scorn or withdrawal of patronage. I like Mr. Stewart's spirit, but I fear he has over-estimated the call to join the standard frame army.

A CORRECTION.

In reply to Mr. Schrock, on page 336, I wish to correct an error made by you, or I, Mr. Editor, and that is: "If I go to a colony of any kind or size, at any time, and remove the queen, they construct no such queen cells as the same colony will when they do it of their own accord, with the queen in the hive." The italics shows the change. I presume, in my hurry, I made the mistake.

The pending "honey glut," that which I have so long expected, it seems, is well-nigh upon us. It is with much interest that I await and watch the results which this state of things will have upon the tweedle-dee element of our pursuit.

Dowagiac, Mich., July 4, 1883.

For the American Bee Journal.

The Best Size for Brood Frames.

DR. G. L. TINKER.

All things considered, what is the best size for brood frames? We are told time and again that the standard Langstroth frame is. It is argued chiefly that it is the best, because so many use it. As practical, valid reasons do not appear to be forthcoming why it is the best, we are inclined to the belief that much of the high-sounding praise bestowed upon it is either vague or intended for buncombe.

The truth is, that so many beekeepers use the Langstroth frame because it was the size recommended by the Rev. Langstroth, and first introduced under his patent. Thousands of his original hives were disseminated over the country before any other size of movable frame hives were extensively known. And many continue to use his frame not because it is thought to have special advantages over any other size, but out of respect to one of the most noted beekeepers of this country, past or present, which is a reason of some merit. Again, it has had extensive and systematic advertising, and it is due, unquestionably, to the above causes that it is more widely and extensively disseminated in this country than any other size of frame.

It is well known that the adoption of the Langstroth frame in Europe has made no great headway. If it had the singular merit of being the best frame for any and all purposes of bee-keepers, as is claimed so confidently, we can well think that our

European friends would not be slow to adopt it as a standard.

THE SHALLOW FRAME.

What were the inducements that led the Rev. Langstroth to adopt a shallow frame? It will be remembered that there was a time when it was thought that a honey-board having auger holes through it for the bees to pass up into two or more large boxes, was the right thing. Very well, it did not take so good an observer as the Rev. Langstroth very long to ascertain that even black bees would not travel more than half a mile through shallow chambers and auger holes in order to get into the boxes and expect them to store surplus to advantage. He, therefore, made the shallow frame, and set the boxes down as near to the brood as possible. And he found that a frame about 9 inches deep gave the best results. As to this one point, I do not believe there is a bee-keeper in the country who will dispute the correctness of his finding where a honey-board is used, and this principle will hold true in any case where the shallow chamber above the brood frames is allowed, honey-board or no honey-board.

So my first argument against the Langstroth frame is to score one for it. Is not that fair? But an unprejudiced consideration of the points that go to make the best frame demands it. My objection, therefore, to the standard Langstroth frame is in the length, and I opine that the sole reason that it was made so long was to accommodate just two more 6-pound boxes at the rear of the hive, as the modern system of tiering up section boxes was as yet unthought of, and without which sufficient surplus capacity on the top of the hive could not be had. There is, however, just one advantage in the length, but this is slight, and more than counterbalanced by a number of serious disadvantages.

BEST WINTER FRAME.

It will be remembered that in the spring of 1881, after the hard winter, conceiving that there might be some very great advantage in the size of brood frames, either in depth or length, or both, for safe wintering, the writer undertook a searching investigation to that end, and collected much valuable information on the subject. This investigation developed the fact that there are two points of advantage in the size of frames for wintering; an advantage in the length as well as in the depth; that the advantages of the American and Gallup size of frames in depth over the Langstroth frame were offset by the greater length of the latter. Consequently the result in wintering on these frames, other things being equal, was about the same.

As a matter of fact, the Shuck and Quinby size of frames are the best to winter bees upon, and both of these are longer and deeper than the Langstroth. The reason that the editor of the BEE JOURNAL was able to give a better showing for the Langstroth

frame in his general report than I gave in mine on the result of wintering 10,000 colonies of bees in the northern States, was due to the fact stated by Mr. Geo. W. Baker, in the June number of the *American Bee-Keeper*, viz.: "The report being taken from all over the United States." That is accounted for as follows: There are probably ten Langstroth hives in the South to one of all other kinds of movable frame hives. As bees winter the best in the South, it can be readily seen how reports from Virginia, West Virginia, Kentucky, Tennessee and Arkansas should materially alter the footings of the reports made here at the North, if included with them. Recognizing early this liability to error, it was stated expressly in my report that it was from the northern States only, and the result, as is well known, was a showing against the Langstroth frame, squarely and honestly made, and which, in my opinion, approximated the result here at the North very closely.

The difference between our reports not being very great, caused me to give little attention to it at the time for a reason given in my report (see page 180, BEE JOURNAL for 1881), viz.: "As to the best winter hive, the tables do not show such a great difference between the standard hives as between the different modes of wintering." My conclusion was, that the difference in the size of frames, as far as wintering is concerned (especially in protected hives), is not worth contending about.

I have been thus explicit in the review of that investigation, to set at rest, if possible, the idea of so many bee-keepers that the shape of the brood frame is any considerable factor of the problem of successful wintering. Hence, in footing up the points of the best frame, I shall not take into consideration the fact that a long and deep frame is a little the best to winter bees upon, since, if properly protected and ventilated, bees will winter about as well in one kind of hive as another, and if I remember aright, the editor of the BEE JOURNAL has expressed himself to about the same effect.

The points that can be sustained against the standard Langstroth frame are as follows:

1. It is a great disadvantage over a shorter frame in building up weak colonies in the early spring, since the bees will cluster in the front end of the hive, leaving the whole back end vacant, so that the heat of the colony cannot be economized by a division-board.

2. The top-bar is 5 inches longer than necessary to set on a rack containing 28 one-pound or 21 two-pound sections. I use racks of these sizes on 9 Gallup frames with fair success, and the top-bar of the frame is only 13 inches long.

3. It cannot well be made so that the top-bar will not sag in the centre. Nor can it be wired by any process that I have seen, so as to hold the top-bars true and in line with each other. The result is, that in producing comb

honey the top-bars are always more or less waxed up, and are troublesome to clean off so as to get the frames out of the hive. With me this has been the most serious objection.

4. The small sections cannot be used to advantage on a long sagging frame. There are those who will likely be pleased to learn this, but let me say right here, that there is a future for the half-pound section that will astonish some of the slow-going wise-acres.

5. It is, for many persons, too heavy to handle with ease and rapidity.

6. The bees do not, as a rule, build so straight and perfect combs in a large frame as a small one.

The above will, it is hoped, be enough to satisfy those who have been going into ecstasies over the Langstroth frame, that it is not a perfect frame, nor yet the *very best*. I have the Gallup frame in use in the most of my hives, but am free to admit that it is about 2 inches too short for an exclusive top-storing hive. It, however, gives satisfaction, is easily handled, and the combs are generally built true, while the top-bar is seldom found sagged when made of only 5-16 inch stuff one inch wide.

I find that the top-bar of the frame may be 15 inches long, and not sag to give trouble, while it will afford ample room on the top for any kind of section. My judgment, therefore, is that a frame 9x13 inches inside measure, or thereabouts, is about right for all practical purposes, and if ten of them are used in a hive, it combines more favorable points than any other size of frame.

New Philadelphia, O.

For the American Bee Journal.

Adopting a Standard Frame.

A. J. SCHROCK.

As this subject is again being discussed, let us consider what size would give the best satisfaction. 1. In regard to changing those already in use. 2. In making new ones. As most of the frames now in use are the Langstroth frame, we should adopt a frame similar to that. Some have preferred a frame 10x15 inches, inside measure. I object to this size, because those frames that are shallower than 10 inches, could not be used to advantage. 3. The same dies could not be used in making foundation, etc. The only objection I have to the Langstroth frame is that it is too long, and I am inclined to think a frame several inches shorter would give better satisfaction. For this reason I think we should adopt a frame 9½x15 inches, inside measure. As this size is just 2 inches shorter than the Langstroth frame, that frame and hive could be used simply by cutting off 2 inches from one end. The one-pound sections could be used, if need be, or three one-pound sections and 2 half-pound sections could be used end to end. Six sections 4¼x5 inches will fill a broad frame, while 8 4¼x4¼ inches are required to fill the Langstroth frame. A section 4¼x5 inches

is a more convenient size than any smaller size. They will hold a little over a pound, and when well-filled, 1¼ pounds. If a customer asks for about 1 pound of honey, he will get a little more; thus increasing the amount sold, or they can be made to hold just 1 pound by making the sections narrower. It has also several advantages over the Langstroth frame; being 2 inches shorter, it is not as liable to sag; not as many wires are required when wiring the frames. It needs no centre brace to prevent sagging. As 10 Langstroth frames are too many for one hive, 10 frames 9½x15 would be just enough. But as each one has a mind of his own, I fear our talk will not amount to much, but if once adopted, it would certainly be a great convenience.

Goshen, Ind., June 25, 1883.

Putnam County, Ind., Convention.

Mr. F. L. Dougherty gives the following report of this meeting in the *Indiana Farmer*:

We had the pleasure of meeting with the Putnam County Bee-Keepers' Association at their regular monthly meeting, on the third Saturday in June.

The meeting was called to order by President A. O. White, of Greencastle. After some preliminary work pertaining to the regular rules of the Society, the secretary, Mr. W. B. Mann, of Fillmore, read a lengthy article, which was calculated to bring on a general discussion of the many interesting points connected with the bee-keeping interest. He dwelt at some length on the mortality of bees, claiming as a whole, bees were no more liable to disease or death than anything else which the farmer might attempt to grow in connection with the mixed farming so extensively practiced at the present day. While as he said the past two or three seasons had been below the average in honey production in the central part of Indiana, the yield for the present season, to those who had not forsaken the business, would be sufficiently large to cover the entire loss of the three past seasons. The superiority of Italian bees over the black was also claimed, and the reasons why. Breeding from the best colonies, clipping the wings of the queen, its advantages and disadvantages, etc. Pending the discussion of the several questions the Society adjourned for the noon hour. At the call after dinner, the meeting was opened vigorously in the form of a question box, covering almost the entire ground, the morning questions included, all being disposed of in the regular order, calling out the different experiences of the members of the Society. The almost extinct black native bees still had friends in the Society. One thing we noticed, and to which we should like to call the special attention of the members of the Society; the lack of uniformity in hives. This is one of the most important subjects to which the Society can give its attention. Not the Langstroth hive, be-

cause we think it the best now made, but to a perfect hive of some form, and then all exactly alike. There were members present who did not know what form of hive they were using. Did not know the exact size of the frame. Could not tell what size of section would best fit the hive, etc. All of which should be understood at the start, to be able to take advantage of the instinct of the bees, to realize the best results.

For the American Bee Journal.

Controlling Drone Production.

JAMES F. WOOD.

Doubtless many readers of the BEE JOURNAL believe that if their hives were all worker combs, they could have drones reared just where they desired, by giving the colonies drone comb. This, however, is a mistake, at least I never saw a strong colony but would rear drones; either they would tear down worker comb, and in its place substitute drone comb, or rear drones in worker cells, or around the edge of the comb. I first discovered this fact last season. Fifteen colonies of hybrids were brought into a yard of Italians, in which queen-rearing was carried on extensively; as these colonies had their combs all built on wired foundation, of course I thought no drones would be reared. True, none were reared until the hives became crowded with bees, when drones were then tucked in throughout the hive, and it became necessary to cut off their heads every few days. As we did this, we noticed more capped drones each successive time, until they so increased that five or six hundred were in each hive. This is exactly our experience this season with upwards of 50 colonies, built on wired foundation, with the exception that we let the drones hatch. If any think I am in error, I invite them to examine some of their strongest colonies, or a colony that has just cast a swarm, and they will not long be in doubt. Of course I mean one that had no drone comb in the spring.

Hoosick, N. Y., June 27, 1883.

Local Convention Directory.

1883. *Time and Place of Meeting.*
 Aug. 29.—Iowa Central, at Winterset Fair Grounds, Z. G. Cooley, Sec. *Pro tem.*
 Sept. 12-14.—Tri-State, at Toledo, Ohio, Dr. A. B. Mason, Sec., Wagon Works, O.
 Oct. 9, 10.—Northern Mich. at Sheridan, Mich. O. R. Goodno, Sec., Carson City, Mich.
 Oct. 17, 18.—Northwestern, at Chicago, Ill. Thomas G. Newman, Sec.
 Oct.—Northern Ohio, at Norfolk, O. S. F. Newman, Sec.
 Dec. 5-6, Michigan State, at Flint. H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Articles for publication must be written on a separate piece of paper from items of business.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich

Building Comb in Wired Frames.

In the *Kansas Bee-Keeper* for June, some one says I am mistaken in regard to the impracticability of wiring frames for bees to build new combs in, without the use of foundation. He says the force of circumstances caused him to try it, and it worked perfectly, the bees building the combs centrally in the frames with the wires in the septum. This settles the matter with him, of course. I do not remember of having read any one else's experience in the matter. My own experience, that which prompted my answer, is this: On several occasions the foundation has fallen down through neglect of properly securing it, when we were putting it on by hand. Not discovering the accident, the bees went on to build their combs, and, notwithstanding the combs were built between other sheets of foundation which remained in tact, in no instance did they build the comb with the septum on the wires, but the wire usually run right through the cells, and had to be withdrawn. This is all I know about the matter. Further experiments will be required to settle the matter in my mind, and probably in the minds of bee-keepers generally.

What Ailed the Bees?

I send you by this mail pieces of comb taken from two colonies which have two or three cards affected each. I wish you to answer through the *BEE JOURNAL* what ails them, and what is the best plan to pursue with them. The cells of these cards are filled with honey as fast as empty, instead of eggs; and upon opening them, some cells will be empty or the contents dried down. F. A. BURRILL.
Cuba, N. Y., June 29, 1883.

The comb is received. My experience with foul brood is limited to cautiously looking at, and smelling of one comb brought to our Michigan State Convention, at Battle Creek. I have always been so much afraid of it, however, that I have taken pains to "read up" that I might detect it at once, if it ever occurred in my apiary. I have burned your comb and box. To the best of my judgment, I feel sure that there is no foul brood of any type about your comb. I think the cause of the phenomenon you mention, is a temporary one, caused by

some change in the conditions of your hive. It looks more like "chilling." I could not decide satisfactorily to myself, unless I could have more light regarding all the conditions, and perhaps not then. If it continues, with no seeming cause—to change the queen would be my advice.

Fastening Wired Foundation.

Having been unsuccessful in fastening the wired foundation in frames, please give, in the *BEE JOURNAL*, the best method of fastening it.
Racine, Wis. F. A. GIBSON.

ANSWER.—Nearly all feel the necessity of some device to hold the foundation true in the centre of the frame, to a certainty, and I think I am safe in saying that all of the devices known to the public at present, none equals the use of tinned wire, woven through the frames. Proceed as follows: When your frame material is out, and before nailed up, punch holes (centrally) through the top and bottom bars about 2 inches apart, and have the outside holes not further from the end bar than $\frac{1}{2}$ or $\frac{3}{4}$ of an inch. For hand pressing, as I am now describing, use No. 30 tinned wire. Now sew the frame, beginning in the middle and sewing each way with each end. To fasten the ends I use a small tack, or the nails that nail the bottom bar may be left a little out. Be careful not to bow the bottom bar by drawing the wire too tight. Diagonal wires may be put on, but I do not use them, as I find no need for them. To use them, fasten one end to the nail head, and then go down through the first hole, and through the one nearest the centre of the other bar, then up through the other centre hole, and fasten this end the same as the first. Now the frame is wired. Next make a lap-board larger each way than your frame is the longest way. Now cut from $\frac{1}{2}$ inch lumber a board that is $\frac{1}{4}$ inch smaller each way than the inside measure of your frame. Nail this board securely to the $\frac{3}{4}$ lap-board, and let the grains run cross-ways of each other. This will prevent warping. With a sponge or rag wet the thin board or form. Have already cut, some sheets of foundation $\frac{1}{8}$ less in size than your frame measures inside. Turn up about 3-16 of one edge, and (have the wax sheet warm) with a stiff, broad putty knife, or chisel, mash the turned-up portion to the top-bar (which should not be rough), so that the sheet will hang centrally in the

frame. We have a rest fixed for the frame, on our work bench, to hold it while we do the mashing. Next lay the frame and foundation (foundation down) on the lap-board and over the form, and while the sheet is plastic.

Stroke the wires with the edge point of your jack knife with a drawing motion, and while this little cut will do the foundation no harm, if struck every $\frac{1}{2}$ inch or so, the wire will be thus embeded into the centre of the foundation in a practical manner, and very quickly too, and so that it will stay, holding the sheet in perfect position while the bees make it into comb, which they do. Given foundation in about 24 to 48 hours. There is no objection to these wires at all. Honey, pollen and brood do as well in the wired cells as any.

Is it not Contradictory?

Will Mr. Heddon please tell us what he means by saying, on page 314, of the *BEE JOURNAL*, that "less colonies are required to gather the honey of a given area, when they are working for extracted honey than when working for comb honey?" In the next paragraph he says: "He can get but little more extracted than comb honey." Here is a seeming inconsistency. Why should it require a much less number of colonies to a given area for extracted than for comb, if a colony can gather only a "little more" extracted than comb honey?

Jos. G. STEER.

Barnesville, O., June 25, 1883.

ANSWER.—What I meant by saying that less bees were required to gather a field when running for extracted honey rather than for comb honey, I will explain as follows: When running for comb honey, a considerable number of bees are kept at home in building comb, capping over, and ripening the honey to an extent beyond that which bee-keepers generally allow the honey to be ripened and capped when running for extracted honey. Another thing, you will notice most bee-keepers get nearly twice as many pounds of extracted as of comb honey, though this state of things ought not to be, still it is, as a rule, and I made my answer somewhat fitting to things as they are. Of course we weigh it up, sections, foundation and all, with our pounds of comb honey. Now, the difference in the number of bees required to exhaust a field, by one running for extracted honey, would depend entirely upon the skill of the producer. At all events you will see there must be a difference any way. When bee-keepers learn to estimate

this business in the light of how many fields they had better occupy, and how much capital and labor it will require to exhaust the field, instead of how much surplus honey a colony of bees can gather, we shall be getting down to business and to the solid facts of apiculture.

Syrian Bees Crossed with Italians.

Please explain more fully what has already been explained (perhaps plain enough for some), but I do not fully understand it. On page 314, of the Weekly BEE JOURNAL, of the present year, there is a question asked, "What objection would there be to crossing the Holy Land bees with the pure Italians, etc.?" The answer is, "They have not the valuable qualities possessed by the Italians," but the brown Germans have. I think I have read that what is commonly called the black bee, is a German bee (of course they are a brown bee). Am I right in that? Is that the bee you mean? Do you consider the leather-colored Italians better than the bright ones, and the crossing you speak of better still, best of all? EDWARD MOORE.

Barrie, Ont., June 27, 1883.

ANSWER.—My answer regarding crossing Syrian with Italian bees, is not worded just as I meant to have it. I think it should read: "They have not the valuable qualities *not* possessed by the Italians, and which the honey-producer so much needs, but which the brown Germans have." The idea I meant to carry was this: that the excellent qualification possessed in such an exalted degree by the brown German bees, namely, rapid and perfect comb building, and white capping of the honey, is not, if I am properly informed, possessed by the Syrians. I have demonstrated that hybrids produced by crossing Germans and Italians *may* be as amiable as any bees in the world, but I doubt if such can be realized by crossing the Italian and Syrians. Regarding the two varieties of German bees, let it be understood, the brown bee is by far the most common, and is the bee possessed to a greater or less extent by those who keep "black bees." The little black bee is smaller and a more shiny black, and is a poor honey gatherer, exceedingly irascible, and when crossed with the Italian, especially the bright yellow Italian, gives us the naughty hybrid. Many black-bee apiaries (most, in fact) are made up of bees which seem to be a mixture of the brown and black Germans. Those who propose to breed crosses between the Italians and Germans, should see to it that they start with the brown Ger-

man bee, entirely free from this little black blood, and straight leather-colored Italians.

SELECTIONS FROM OUR LETTER BOX

Discouraging Weather in New York.

When I last wrote we had been having three days of fair weather, so the bees were getting a little more honey than they consumed. We had one more fine day, then it commenced to rain again, and it has now rained three days. Farmers are nearly discouraged. The ground had got dry enough the four fair days, so they had just begun to cultivate their crops, and now it is soaked and water stands on the driest ground. Clover is likely to pass by without giving any surplus honey. G. M. DOOLITTLE.

Borodino, N. Y., June 28, 1883.

An Insect—Leaf Cutter.

I enclose an insect, which I found working in great numbers with my bees, upon the Mammoth Russian Sunflower. Upon examination under a common microscope, I found all of the main points visible on a bee, but on a coarser scale; the head, wings and legs seemed to be out of all proportion to the rest of the body. They possess stings which they know how to use. I watched several of them for some time, but only saw them gathering pollen, which they did in a similar manner to the bee. Please inform me through the BEE JOURNAL. 1. Their name. 2. How and where they build their nests. 3. Whether they store away honey or not. Bees are doing very poorly. M. T. HEWES.

False River, La., June 17, 1883.

[The pretty little bee is a leaf cutter, *Megachile brevis*. Unlike the hive bee and several other species, this one does not live in colonies, but each female makes and provides for her own nest. The latter is made of bits of leaves cut in circular shape, and wonderously regular and workman-like. The nest is placed in some sheltered position, under balconies of houses, rails of fences, limbs of trees, etc. No honey is stored, the larvæ being fed on pollen. Set some of the young folks to watching the curious operations and interesting habits of this busy worker. Look for circular cuts from leaves, especially of rose bushes.—T. J. BURRILL, Champaign, Ill.]

Honey Gathering in Connecticut.

My 90 colonies and 40 nuclei keep me busy. The first swarms here were on May 18, about 10 days earlier than usual. White and red clover bloom is abundant; I never before saw so

much. Bees are working strongly on both. There is a heavy basswood and sumac budding. Honey is coming in rapidly. The losses of the past winter are more than repaired, and swarms are issuing daily. Many of the early swarms are casting swarms and working in boxes too.

H. L. JEFFREY.

Washington Depot, Ct., June 30, 1883.

Rolling in the Honey.

Times have changed greatly since the 19th. We have had no rain for 12 days. My bees are just rolling in the honey, and in spite of all the sections one can pile on, they will swarm.

S. L. VAIL.

Coal Creek, Iowa, June 30, 1883.

Honey Crop a Failure in Texas.

Our honey crop, so far, is a failure. I have had bees in such condition as to surplus but once in 4 years. It will not make half a crop this season. Horsemint is in bloom, and there is plenty of it, but the weather has been so unfavorable that the flowers secreted no nectar. Every hive is full of bees, but we have no swarms (not over 5 per cent.) and no honey.

WM. R. HOWARD.

Kingston, Tex., June 29, 1883.

A Bee Killer—and a Flower.

I enclose an insect upon which I should be glad to have you give me some information. I find a great many of them, late in the evening, in my apiary, and have just discovered that they catch bees. This insect, as you see, has one in its mouth, partly eaten, and it held another in its claws, when I killed it. I also send you a bunch of flowers, with a twig from a bush that grows in my yard. The bees swarm on it all day. My bees have not swarmed much, but they have gathered a great deal of honey, filling up the combs every two or three days since April 15. It is all that I can do to take the honey from them. All the bee-keepers in this vicinity report a bountiful harvest.

W. G. MCLENDON.

Lake Village, Ark., June 20, 1883.

[The bee-killer is what is very commonly called a dragon fly, sometimes darned needle, mosquito hawk or snake feeder. The scientific name is *Eschna heros*. This is by no means the first time the large insect has been known to catch bees, though they more often capture other, and especially smaller prey. They are appropriately called mosquito hawks. In the larval or young condition the wingless, strange looking things are called water tigers. They live in the water and catch living prey in their powerful sharp-pointed jaws, which they can thrust out, by a peculiar appendage, with the rapidity and effectiveness of a steel trap. They live about a year in the water, then transform into the winged insect

and continue their predaceous habits in the air. Probably they do no very serious damage to the bee colonies, yet in special cases the loss might be considerable. I do not know any effective preventive.

The shrub is known to botanists as *Myginda latifolia*, a native of our Southern States. I am not acquainted with any common name, neither do I know anything of its nectar-producing value—probably not great.—T. J. BURRILL, Champaign, Ill.]

White Clover Thicker than Ever.

I had 7 colonies of bees in the spring; most of them in common hives; but reading the BEE JOURNAL induced me to transfer 5 of them to frame hives. I have been successful, and have now 15 colonies. The white clover is thicker than ever known here.

HENRY ERBRODT.

La Harpe, Ill., June 29, 1883.

Not Snow, but Clover.

The whole earth hereabouts is white with bloom, and our bees are fairly bursting with their loads of honey, as they return from the fields; and such honey, so thick, it almost stands alone, and the combs are as "white as the driven snow." I saw Prof. Hibbard at his South Bend apiary, the other day, with honey fairly dripping from his garments, and a glow of gladness all over his face. Tell Mr. Heddon to roll up his sleeves, and Mr. Doolittle to take off his overcoat. Tell all the boys to get out their honey pots, for this is the great honey year of the century. Let the horse-mint State, and the Pacific Slope take back seats, and the Buckeye State will come to the front, for it is "our turn to be sweet." This sounds, I know, a good deal like buncombe, but it is nevertheless solid gold, for we are just reveling in it.

J. W. BAYARD.

Athens, O., June 28 1883.

Magnificent Clover Bloom.

It has been a very showery season, so far. We have a magnificent bloom of clover, but bees scarcely gathering a living, to date. At present it is clear, with northwest winds, which looks favorable for honey flow.

H. S. SEE.

Geneva, Pa., June 30, 1883.

My Visit to Arkansas.

I returned from Arkansas one week ago, and found my bees working nicely on white clover and the last of red raspberries. My wife had managed them very nicely; to avoid swarming she had tiered them up, and to-day the upper stories are full, and for the first time in my life, I have raised the second story and placed another under it. I have plenty of dry combs for the purpose. The honey in the upper stories is too thin to extract. While in Arkansas I met Dr. W. W. Hipolite, of De Vall's Bluff (the first wide-awake bee man I met

in the State). He is very genial, but for the last year or two has had too much to do to give his personal attention to the bees; he has a son, Walter H., who is looking after the bees. I am quite taken up with the country round about De Valls Bluff, so much, so, that I think of going there to live, if all goes well. When I left them, on June 17, their bees had all done swarming, and they had commenced taking off capped honey. They have no fears of winter; their greatest difficulty is to keep swarming down to what they can handle. I have had my first swarm to-day; others will issue to-morrow, if the weather will permit. Mr. Ross has had 25 or 30 new colonies. Tiering up has prevented ours.

O. R. GOODENO.

Carson City, Mich., July 1, 1883.

Honey Very Thick.

The honey season is very satisfactory here. The quality of the honey is the finest that one could imagine—so thick that it "piles" when running from the extractors. The comb honey in sections is exquisite in every respect.

G. W. DEMAREE.

Christiansburg, Ky., June 29, 1883.

Recovered from Spring Dwindling.

My bees have been affected with spring dwindling, and have recovered very slowly; they are just beginning to swarm, while some are storing little honey. White clover is very abundant now. The spring has been too cold.

T. N. MARQUIS.

Woodland, Ill., June 30, 1883.

Honey from Dog Fennel.

Mr. Newman, is the honey from dog fennel poisonous? I am aware that the seed will kill ducks; and it is reported to kill chickens. The honey from it is very bitter, disgustingly so, and if you like fun at others' expense, just coax them to taste some of the honey. One dose is sufficient. Two years ago, by using two extractors, I got two 5-gallon cans of the bitter honey, thinking to feed it to bees, if necessary, but had no occasion to, as they did not need it. The following season, in fruit time, in looking over honey for putting up fruit with, and tasting the honey, there was not the slightest taste of bitterness, and honey being scarce, one of my customers insisted on taking a can of it, though at a reduced price. He afterwards spoke of it as being all used up, and found nothing unpleasant about it. We used the balance in preserving our fruit. It was dark, but that really was no objection for home use. The fruit turned out well; some kept over a year, and was as good as any. No one could tell that it came from dog fennel. Of course there must have been other honey with it. Since then I have cut the dog fennel. The buckeye is in bloom, and has been now for some time. Why I wish to know about the flower being poisonous, is this: I find, during the last few days, young bees coming out of the hives to die; they do not appear to be cleaned off, and are just

hatched. On opening the hives I find unsealed honey, so they do not seem to be short of stores (there is plenty sealed). The queen seems all right, and laying. The *Tione*, or bear bush, is just coming in bloom, and it may be that the honey from this does not agree with the young bees. The bees work very lively on it. The honey from it has a tart taste. I only noticed a few of the hives in that condition; the rest of them are in a normal condition. I have no disease among my bees. All the colonies are strong. I have increased from 23 in the spring to 70. All have honey enough to go through the season with. Comb honey will amount to but little with me. All I get is extracted from the brood apartment, to give the queen room, and keep down swarming. I depended on natural swarming this season, but see no advantage over dividing at the proper time; no swarms got away. Some young queens swarmed out, with full colonies. The honey crop is short, owing to continued cold rains and long spells of northerly winds, which dried up the late bloom or stopped the secretion of honey.

J. D. ENAS.

Napa, Cal., June 25, 1883.

[We have never seen any honey from dog fennel, that we are aware of, and, therefore, do not know whether it is poisonous or not. If any have had honey from it, they will please report.—ED.]

A King Bird's Meal.

I send you a box by mail containing the contents taken from a king bird's crop, which I shot to-day. Please give it a microscopic examination, and see if you find worker bees or drones. I shot two, to-day, and by examining their crops, I have about concluded that they catch nothing but drones. Bees in this locality are in fine condition, and are storing surplus honey quite rapidly.

W. W. SHERWIN.

Warsaw, N. Y., July 4, 1883.

[We have examined the poor bird's meal, and find nothing but drones in it.—ED.]

Presistent Swarming.

Bees are on a big boom here. I have taken something over 5,000 pounds of honey, up to date, from 97 colonies to start with. For 12 days, when swarming was the rage, I had not a single brood frame or comb not in use, and Mr. Muth could not supply me. I was having from 6 to 12 swarms a day, and my bees in two apiaries, $1\frac{1}{2}$ miles apart; had all the old queens' wings clipped. I had a black woman at the largest apiary who would catch and cage the queens when the swarms came out, and lay the cage in the portico, or in front of the hive, as many of my hives are somewhat like Mr. Heddon's, without porticos. I added sections, supers, cut out queen cells, distributed the bees around (a quart to one hive, a wash pan full to another) until I got

everything full. I kept some queens caged, just lying in the portico for a week. I am a queens' wing "clipper," henceforth. I formerly said I did not let my bees swarm. I now take it all back. Several nucleus colonies swarmed. I had to stuff them full of bees by dividing up my colonies, and they started other cells, and when the queen hatched in the cell I gave them, out they came, and in some cases, leave with a swarm, when the old mother had to stay at home. The bees are swarming now, and I must see about it. E. DRANE.
Emenence, Ky., June 27, 1883.

Bees are Doing Well Here.

There are four times as much white clover, this year, as there has ever been in this part of the country. HUGH McCORMICK.
Pellsville, Ill., July 5, 1883.

Best Season for Many Years.

Bees are doing well here, this season. It is the best season that we have had for many years. There are not a great many bees in this county. Comb honey sells readily at 20 cents per pound. I am running my bees for comb honey, this season.

JOSEPH E. SHAVER—15.
North River, Va., June 29, 1883.

Too Rainy.

It has been too rainy for bees; for the last two days they are doing well, but I am afraid of more rain shortly. I have but 8,000 pounds of extracted honey up to date. I have about 600 colonies, 500 in good condition.

L. LINDSLY.
Waterloo, La., July 2, 1883.

The National Convention.

The National Bee-Keepers' Association, will hold its Annual Convention in the City Hall and Council Chamber in the city of Toronto, on Tuesday, Wednesday and Thursday, the 18th, 19th and 20th days of September, during the second week of Canada's Great Fair. All the railroads in Canada will issue tickets during this week, good to return, up to Saturday night 22d, at single fare for the round trip. Special excursion rates will be arranged from various parts of the United States, of which due notice will be given. Those who intend being present may be kept posted on the latest excursion rates, etc., by addressing me, and also that I may arrange hotel accommodation. Private lodgings will, if possible, be secured for those who desire it, and every effort will be made to make everybody comfortable. A grand meeting is anticipated.

D. A. JONES, President.

The bee-keepers of Haut County, Texas, will meet at Dr. Wm. R. Howard's apiary, on the 19th of July, for the purpose of permanently organizing a County Association.

WM. R. HOWARD.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with \$4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with \$6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with \$8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with \$10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for \$2.75, or the Monthly Bee Journal, and the Manual in cloth for \$1.75. As this offer will soon be withdrawn, those who desire it should send for the book at once.

How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price still lower, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 50 cents; per hundred, \$3.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

How to Advertise Judiciously.

This is what Robert Bonner, the New York publisher, and one of the most extensive advertisers in the country, has to say on the very interesting subject of advertising. Its application is general enough to cover the entire field:

"One of the points of good advertising, is to address the same people over and over again. For instance: Suppose you were introduced, with about 500 others, to the President, the chances are that the President would not remember you. But if you had an opportunity of seeing him again, and said, 'Mr. President, I am Charles Wolsey, of Brooklyn; Senator So-and-so did me the honor of introducing me to you,' and you did this two or three times, you would be sure to be remembered. In the same way an advertisement presented once is forgotten, while one presented over and over again makes an impression."

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 50
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—one-cent stamps; if not, any denomination of postage stamps will do.

